In the Claims

The claims have been amended as follows:

1. (currently amended) A method of forming an interconnect structure comprising:

providing a lead free solder joint;

providing a lead-containing solder;

aligning said lead free solder joint with said lead-containing solder;

heating said aligned lead free solder joint and lead-containing solder to a temperature ranging from about 175°C to about 260°C ~~above a melting point of said lead free solder joint~~ for a ~~sufficient~~ time ranging only from about 1 minute to about 4 minutes to allow for complete homogenization of said lead free solder joint with said lead-containing solder to form a homogenous hybrid interconnect structure having a configuration characterized by having no distinct regions of said lead free solder joint and said lead-containing solder.

2. (original) The method of claim 1 wherein said lead free solder joint comprises a material selected from the group consisting of Sn-Ag (SA), Sn-Ag-Sb, Sn-Ag-Bi, Sn-Ag-Cu (SAC), Sn-Ag-Cu-Sb, Sn-Ag-Cu-Bi, Sn-Ag-Bi-Sb, Sn-Cu (SC), Sn-Cu-Sb, Sn-Cu-Bi, Sn-Ag-Cu-Sb-Bi or combinations thereof.

3. (original) The method of claim 1 wherein said lead free solder joint comprises a material selected from the group consisting of Sn-Zn, Sn-Zi-Bi, Sn-In, Sn-Bi, Sn-Ag-In, Sn-Ag-In-Cu or combinations thereof.

4. (original) The method of claim 1 wherein said lead-containing solder is selected from the group consisting of a lead-containing solder paste, a lead-containing solder paste with organic flux, or a lead-containing solder paste without organic flux.

5. (original) The method of claim 1 wherein said lead-containing solder comprises a tin-lead paste.

6.-8. (canceled)

9. (currently amended) A method of forming an interconnection grid array structure comprising:

providing an interconnection grid array of lead free solder joints;

providing an array of lead-containing solder, said array of lead-containing solder corresponding to said interconnection grid array of lead free solder joints;

aligning said interconnection grid array of lead free solder joints with said array of lead-containing solder;

heating said aligned interconnection grid array of lead free solder joints and said array of lead-containing solder to a temperature ranging from about 175 °C to about 260°C ~~above a melting point of said lead-free solder joints~~ for a ~~sufficient~~ time ranging only from about 1 minute to about 4 minutes to allow for complete melting and mixing together of said interconnection grid array of lead free solder

joints and said array of lead-containing solder such that lead from said lead-containing solder disperses throughout said interconnection grid array of lead free solder joints to form a homogenous hybrid interconnect grid array having improved, reliable levels of thermo-mechanical fatigue and characterized by having no distinct regions of said lead free solder joint and said lead-containing solder.

10. (original) The method of claim 9 wherein said interconnection grid array of lead free solder joints comprise a material selected from the group consisting of Sn-Ag, Sn-Ag-Sb, Sn-Ag-Bi, Sn-Ag-Cu, Sn-Ag-Cu-Sb, Sn-Ag-Cu-Bi, Sn-Ag-Bi, Sn-Ag-Bi-Sb, Sn-Cu, Sn-Cu-Sb, Sn-Cu-Bi or combinations thereof.

11. (original) The method of claim 9 wherein said interconnection grid array of lead free solder joints comprise a material selected from the group consisting of Sn-Zn, Sn-Zi-Bi, Sn-In, Sn-Bi, Sn-Ag-In, Sn-Ag-In-Cu or combinations thereof.

12. (original) The method of claim 9 wherein said array of lead-containing solder is selected from the group consisting of an array of lead-containing solder paste, an array of lead-containing solder paste with organic flux, or an array of lead-containing solder paste without organic flux

13. (original) The method of claim 12 wherein said array of lead-containing solder comprises a tin-lead paste.

14.-15. (canceled)

(currently amended)

16. (~~original~~) The method of claim 9 wherein said configurations of said solder joints are substantially oblate ellipsoid shapes.

17-20. (canceled)